



AB 32 measures can bring clearer skies and improved health to Californians

Boosting the Benefits: Improving Air Quality by Reducing Global Warming Pollution in California

AB 32 measures could significantly improve the health of many Californians and save billions of dollars in health costs in the year 2020 alone.

Read the full issue paper online at www.nrdc.org/globalWarming/boosting/contents.asp

The California Global Warming Solutions Act (AB 32) provides a significant opportunity to improve air quality and public health in the Golden State. Our new analysis shows that many strategies for combating global warming will reduce air pollution, which lowers health risks. In fact, measures being considered for implementation under AB 32 could prevent more than 700 premature deaths and thousands of other negative health impacts annually, saving \$3.2 to \$5.0 billion in health costs in the year 2020 alone. New evidence of increased health impacts from exposure to particulate matter suggests that these health benefits and savings may be even greater than estimated here. California should adopt these measures to reduce global warming pollution and provide tremendous short- and long-term health “co-benefits” by improving air quality and combating global warming at the same time.

Global Warming Worsens Air Pollution in California

Improvements to air quality and public health are sorely needed, as California is home to five of the 10 smoggiest cities in the United States—and its residents are paying the price with their health. Air pollution, in the form of nitrogen oxides (NO_x) and particulate matter (PM) from vehicles, power plants, refineries, and other industrial sources, poses serious health threats to California’s residents. Research also shows that hotter temperatures will lead to higher emissions of

smog- and soot-forming gases such as NO_x, while also accelerating the formation of ozone smog. This pollution is linked to respiratory hospital admissions and emergency room visits, decreased lung function, and increased mortality related to cardiovascular and respiratory illnesses. As global warming increases NO_x and PM pollution and accelerates smog formation in the state, it is even more important that California cut pollution emissions to improve the health of its millions of residents.

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Immediate and Comprehensive Action Under AB 32 Is Needed

California took an important first step toward reducing global warming pollution in 2006 when the state enacted Assembly Bill 32, the Global Warming Solutions Act, which will reduce California's greenhouse gas emissions to 1990 levels by 2020. Now, the state must take specific measures that will reduce global warming pollution while offering the added co-benefit of improving air quality, thus lowering health risks to Californians. The measures that will achieve the greatest amount of global warming emissions reductions—cleaner cars and trucks, energy efficiency, renewable energy, and smart

growth—also contribute to significant reductions in NO_x and PM. We estimate that all of the measures currently under consideration could reduce roughly 135,000 tons of NO_x and 6,000 tons of PM in 2020.

We estimate that all the measures necessary to meet AB 32 will prevent hundreds of premature deaths and thousands of cases of asthma and respiratory illnesses, as shown in the table. A comprehensive package of policies to meet AB 32 and achieve reductions in global warming pollution in all the major sectors will provide substantial health co-benefits, saving Californians billions in health costs and vastly improving air quality.

Better Health for All Californians

The location of these potential health co-benefits is just as important as the magnitude of the benefits, especially given that many of California's communities of color and low-income communities have been and continue to be disproportionately impacted by pollution. In order to illustrate where the greatest co-benefits are likely to occur in the state, we created maps to pinpoint the locations of some of the largest industrial contributors of global warming pollution. The maps include major facilities in three industrial sectors—power plants, cement plants, and petroleum refineries—that together constitute roughly 20 percent of the total global warming pollution. However, these sectors also have the potential to significantly impact the health of local communities. In short, the maps reveal that while high-carbon and high-health-risk facilities are located throughout the state, the highest impact facilities tend to be clustered in just a few areas. View the maps online at www.nrdc.org/globalWarming/boosting/contents.asp.

Public Health Benefits of Global Warming Pollution Reduction Measures in California in 2020

Avoided Health Impacts in the Year 2020	Total	Value (in millions of dollars)
Premature Death	710	\$ 3,200 – 5,000
Hospitalization (respiratory)	140	\$ 2.7 – 4.2
Hospitalization (cardiovascular)	270	\$ 6.0 – 9.5
Asthma and other Lower Respiratory Symptoms	18,000	\$ 0.2 – 0.3
Acute Bronchitis	1,500	\$ 0.3 – 0.5
Work Loss Days	110,000	\$ 12 – 18
Minor Restricted Activity Days	630,000	\$ 18 – 29

Sources: Updated Macroeconomic Analysis of Climate Strategies Presented in the March 2006 CAT Report, Final Report, October 2007; CARB, Expanded list of EAMs, October 2007; NRDC and others, *Recommendations for Policies to Reduce Global Warming Pollution for the AB 32 Scoping Plan*, October 1, 2007. Health impacts and values were estimated using the health impacts assessment methodology from the CARB Goods Movement Emissions Reduction Plan, April 2006.

Recommendations for Improving the Health of Californians

NRDC recommends that California use all existing tools and technologies to continue developing innovative ways to combat global warming and protect the health of Californians. Specifically, the state should:

- Study, quantify, and maximize the co-benefits provided by each measure in the package of policies used to meet the AB 32 global warming emissions limit.
- Identify measures to reduce global warming pollution and provide air quality and health co-benefits in highly polluting sectors for which there are currently few specific measures, such as petroleum refining, oil and gas extraction, and agriculture.
- Make information about co-benefits available to the public to clarify how the state's efforts to reduce global warming pollution will also reduce air pollution and benefit public health.
- Take into account the global warming benefits of reducing ozone smog and soot when adopting global warming pollutant, air quality, and toxic reduction regulations.

For a full list of sources and citations, please see the complete issue paper online at www.nrdc.org/globalWarming/boosting/contents.asp

